

REMARKS

I. Status of the Application

Claims 15 and 18-34 are pending in this application. In the March 31, 2008 office action, the Examiner:

A. Rejected claims 15, 18, 19, 20 and 24 under 35 U.S.C. § 102(b) as being anticipated by JP 06-053800 to Hirano Yoji (hereinafter “Hirano”); and

B. Rejected claims 18, 21-23 and 25-34 under 35 U.S.C. § 103(a) as being unpatentable over Hirano in view of US 5,045,733 to Sendelweck (hereinafter “Sendelweck”), US 5,438,285 to Pavlin et al. (hereinafter “Pavlin”), US Pub 2003/0089980 to Herfurth et al. (hereinafter “Herfurth”), US 6,667,514 to Ahlers et al. (hereinafter “Ahlers”), US 6,444,504 to Zivic (hereinafter “Zivic”) and US 6,855,981 to Kuma (hereinafter “Kuma”).

In this response, applicants have amended claims 15, 20, 24 and 30 and cancelled claims 18 and 19.

II. The Rejection of Independent Claims 15 and 24 Under 35 U.S.C. § 102(b) Should be Withdrawn

In the March 31, 2008 office action, the examiner rejected claims 15 and 24 under 35 U.S.C. § 102(b) as being anticipated by Hirano. As provided in MPEP § 2131, “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of*

California, 814 F.2d 628, 631 USPQ2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989). In addition, the elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Hirano does not disclose all the limitations of claims 15 and 24. One example of a limitation of claims 15 and 24 not shown in Hirano is that of “a Zener diode coupled between a gate of the first MOS transistor and a gate of the second MOS transistor”. In contrast to claims 15 and 24, Hirano shows a Schottky diode SBD1 provided between the gates of transistors Q3 and Q1.

Another example of a limitation of claims 15 and 24 not disclosed in Hirano is that of “a second resistor connected in series with the parallel circuit formed by the Zener diode and the first resistor between the control input and the gate of the second MOS transistor”. In contrast to this limitation, Hirano only discloses the parallel circuit of a transistor R1 and the Schottky diode SBD1 provided between the gates of the transistors Q3 and Q1.

For at least the reasons discussed above, Hirano does not disclose all limitations of claims 15 and 24 of the present application. Accordingly, it is respectfully submitted that claims 15 and 24 are allowable and the examiner’s rejection of claims 15 and 24 as anticipated by Hirano under 35 U.S.C. § 102(b) should be withdrawn.

III. The Rejection of Independent Claim 30 Under 35 U.S.C. § 103(a) Should be Withdrawn

In the March 31, 2008 office action, the Examiner rejected claim 30 under 35 U.S.C. § 103(a) as being unpatentable over Hirano in view of Sendelweck in view of Pavlin, Herfurth, Ahlers, Zivic, and Kuma (collectively, the “Cited References”). In this response, Applicant respectfully traverses the Examiner’s rejection of claim 30 under 35 U.S.C. § 103(a).

The Examiner’s rationale for a finding of obviousness in the January 2, 2008 Office action is not specifically stated in the context of the examples of MPEP § 2143. However, Applicant notes that pursuant to MPEP 2143, **“the key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious.”** Furthermore, in order to establish a *prima facie* case of obviousness, three basic criteria should be met as set forth in MPEP § 2143.01-2143.03. First, there must be some suggestion or motivation to modify the references or combine reference teachings. MPEP § 2143.01. Second, there must be a reasonable expectation of success. MPEP § 2143.02. Third, all claim limitations must be considered. MPEP § 2143.03.

A. The References Do Not Teach or Suggest All Claim Limitations

In the present case, it is respectfully submitted that none of the Cited References teach or suggest all the limitations of amended claim 30. One example of a limitation of claim 30 that is not taught or suggested by the Cited References is that of a Zener diode comprising “a polycrystalline layer on a polycrystalline gate plane of the first and second MOS transistors

and a zone provided in the polycrystalline layer and having an opposite conduction type to a conduction type of the polycrystalline layer”. In the March 31, 2008 Office action, the examiner admits that this limitation is not disclosed in Hirano, but argues that the limitation is disclosed in Zivic.

In contrast to the limitations of claim 30, Zivic only discloses a polycrystalline multi layer ZnO diode which is provided as a protection against electrostatic discharge and comprises a plurality of polycrystalline layers having a thickness of approximately 20 to 60 μm . Zivic does not suggest a structure wherein a Zener diode is arranged on a polycrystalline gate plane of transistors as disclosed and claimed in the present application. The structure disclosed in the present application, wherein the Zener diode is arranged on a polycrystalline gate plane, is advantageous since the polycrystalline region 13 of the Zener diode can be formed together with the polycrystalline gate electrodes (also see reference numerals 13 in the left and right part of Figure 3 of the present application), so that only a single step is necessary for providing the Zener diode and the polycrystalline gate electrode of the field effect transistors (also see the passage bridging pages 6 and 7 of the present application). However, there is no such disclosure in Zivic of a Zener diode comprising “a polycrystalline layer on a polycrystalline gate plane of the first and second MOS transistors and a zone provided in the polycrystalline layer and having an opposite conduction type to a conduction type of the polycrystalline layer”.

As set forth above, none of the Cited References, alone or in combination, disclose all the limitations of independent claim 30. Accordingly, it is respectfully submitted that the 35 U.S.C. 103(a) rejection of claim 30 should be withdrawn.

B. There is no Motivation to Combine the Cited References

The mere fact that references can be combined or modified does not render the resultant combination obvious unless “there is some teaching, suggestion or motivation” to combine the references. MPEP § 2143.01. Applicants respectfully submit that, while the Cited References could be combined, the examiner has not established a teaching, suggestion or motivation for combining the references. Furthermore, the examiner has not established that the proposed resultant combination would have been predictable to one of ordinary skill in the art, as required by MPEP § 2143.01. As set forth in MPEP § 2143.01, “rejections based on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with rational underpinning to support the legal conclusion of obviousness.” Furthermore, “the key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious ... [and] the analysis supporting the rejection under 35 U.S.C. § 103 should be made *explicit*.” MPEP § 2143.

At page 6 of the March 31, 2008 Office action, the examiner rejects claim 30 under 35 U.S.C. § 103, and provides the following rationale for combining Hirano and Zivic: “it would have been obvious to one of ordinary skill in the art [to] replace the zener diode of Hirano with the polycrystalline diode taught by Zivic for protecting against electrostatic discharge, over current, and over surge.” Applicants respectfully submit that this rationale provided by the examiner for combining Hirano and Zivic is nothing more than a conclusory statement. The examiner has not attempted to explain why the arrangement of Hirano is somehow

deficient such that there would be a need to “protect against electrostatic discharge, over current, and over surge” in Hirano. Should the examiner continue to reject claim 30, applicant respectfully submits that a “*clear articulation*” of why the combination of Hirano and Manning would be obvious should be provided along with an *explicit* analysis.

For at least the reasons provided above, it is respectfully submitted that the examiner has not made a prima facie case of obviousness. Accordingly, it is respectfully submitted that the examiner’s rejection of claim 30 under 35 U.S.C. § 103(a) should be withdrawn.

C. A Reasonable Expectation of Success Has Not Been Established

In order to establish a prima facie case of obviousness, the examiner must at least articulate a finding that there was reasonable expectation of success. See MPEP § 2143(G) and MPEP § 2143.02. However, in the March 31, 2008 office action, the examiner did not even attempt to establish such a finding of a reasonable expectation of success. Therefore, for at least this reason, the examiner has not made a prima facie case of obviousness, and the examiner’s rejection under 35 U.S.C. § 103(a) should be withdrawn.

IV. The Rejection of Dependent Claims 20-23, 25-29 and 31-34 Should be Withdrawn

Dependent claims 20-23, 25-29 and 31-34 all depend from and incorporate all the limitations of one of independent claims 15, 24 or 30. Moreover, each of these dependent claims includes additional novel and non-obvious limitations. Accordingly, it is respectfully submitted that dependent claims 20-23, 25-29 and 31-34 are also allowable for at least the same reasons that independent claims 15, 24 and 30 are allowable, as well as additional

reasons. Therefore, the examiner's rejection of claims 20-23, 25-29 and 31-34 should be withdrawn.

V. Conclusion

For all of the foregoing reasons, it is respectfully submitted the applicant has made a patentable contribution to the art. Favorable reconsideration and allowance of this application is therefore respectfully requested.

In the event applicant has inadvertently overlooked the need for an extension of time or payment of an additional fee, the applicant conditionally petitions therefore, and authorizes any fee deficiency to be charged to deposit account 13-0014.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Russ Fowler", with a long horizontal flourish extending to the right.

Russell E. Fowler II
Attorney for Applicants
Attorney Registration No. 43,615
Maginot Moore & Beck
Chase Tower
111 Monument Circle, Suite 3250
Indianapolis, Indiana 46204-5109
Telephone: (317) 638-2922